PHARMACOLOGY BIOCHEMISTRY & BEHAVIOR

VOLUME 20 1984
SUBJECT INDEX

Acetylcholine, 169
  finate differences method
  mesolimbic areas
  two compartment analysis
Acetylcholine turnover rates, 429
  chronic intravenous morphine
  intravenous morphine self-administration
  opiate reinforcement
l-α-Acetylmethadol, 543
  drug interaction
Acoustic startle
  alpha-adrenergic receptors, 935
  beta-adrenergic receptors, 935
  continuous amphetamine administration, 367
  dopamine receptors, 367
  habituation, 935
  hypotension, 935
  intermittent amphetamine treatment, 367
ACTH
  chickens, 681
  glucocorticoids, 879
  morphine sensitivity, 879
  naloxone, 681
  stress, 681
  striatal DOPAC, 879
$ACTH_{1-17}$ analog, 689
  avoidance
  responsiveness to electrical footshock
Activity
  ethanol elimination, 281
  hypothermia, 281
  MIF-1, 629
  salsolinol, 281
  Siamese fighting fish, 629
  strain differences, 281
Adrenalectomy, 883
  blood ethanol
  brain ethanol
  open field activity
Adrenergic mediation, 301
  cholinergic mediation
  drug interaction
  subfornical organ
Alpha-adrenergic receptors, 935
  acoustic startle
  beta-adrenergic receptors
  habituation
  hypotension
Beta-adrenergic receptors, 935
  acoustic startle
  alpha-adrenergic receptors
  habituation
  hypotension
Alpha-adrenoceptor agonists, 463
  antinociception
  nisoxetine
  noradrenaline
Adrenoceptors, 731
  animal hypnosis
  chickens
  tonic immobility
α_1-Adrenoceptors, 893
  lesions, 6-hydroxydopamine
  MK-801
Affective defense, 841
  aggression
  cats
  electrical stimulation
  hypothalamus
Affiliative behavior, 255
  aggressive behavior
  d-amphetamine
  monkeys
Aggression
  affective defense, 841
  agonistic behavior, 349
  animals, 349
  cats, 841
  defensive responses, 349
  electrical stimulation, 841
  hypothalamus, 841
Aggressive behavior, 255
  affiliative behavior
  d-amphetamine
  monkeys
Agonistic behavior, 349
  aggression
  animals
  defensive responses
Alcohol
  caffeine, 583
  cigarette smoking, 583
  human studies, 583, 639
  memory, 639
  retrograde enhancement, 639
Alcohol, acute, 293
  17-β estradiol
  luteinizing hormone
  macaque monkeys
Ambient temperature, 649
  ethanol
  hyperglycemia
  hypoglycemia
Ambulation-increasing effect, 247
  circadian variation
  methamphetamine
  reverse tolerance
Amfonelic acid, 635
  amphetamine
  drug discrimination
Amino acids, 29
  drinking
  eating
  urine osmolality
Amnesia, 405
  avoidance
  cycloheximide
  memory
Amphetamine
  amfonelic acid, 635
  apomorphine, 181, 855
  ascorbic acid, 609
  bradycardia, 95
  caffeine, 383
  catecholamine agonists, 747
  catecholamine antagonists, 747
  cathinone, 181
  conditioned taste aversion, 643
  discriminative stimulus, 95
  drug discrimination, 181, 635
  drug interaction, 95, 383
  fenfluramine, 489
  food reward, 489
  hamsters, 855
  lithium chloride, 643
  locomotor activity, 383, 855
  LSD, 95
  maze performance, 489
  neonatal monoamine reductions, 95
  pimozide, 73
  play fighting, 747
  push-pull perfusion, 609
  reinforcement, 73
  reward-summation-functions, 73
  stimulus properties of drugs, 181
  striatum, 609
d-Amphetamine
  affiliative behavior, 255
  aggressive behavior, 255
  dl-cathinone, 721
  cocaine, 721
  conditioned avoidance responding, 721
  drug interaction, 619
  haloperidol, 721
  McNeil 4612, 227
  methysergide, 721
  methylphenidate, 227
  monkeys, 255, 619
  phencyclidine, 619
  repeated acquisition, 619
  self-administration, 227
Amphetamine cumulation, 415
  operant behavior
  tolerance
Amphibians, 653
  serotonin
  sleep-like states
Analgesia
  body temperature, 289
  cold water swim, 631
  immobilization, 289
  morphine, 631
  nociception, 289
  stress, 289, 631
  stress-tolerance, 631
Anaphylaxis, 483
  hypoactivity
  opiate antagonist
Animal hypnosis, 731
  adrenoceptors
  chickens
  tonic immobility

Animal model, 425
chronic antidepressant treatment
serotonergic receptors
trazodone
Animal model of depression, 979
imipramine
rhesus monkeys
separation-induced vocalizations
Animals, 349
aggression
agonistic behavior
defensive responses
Anorexia
eating, 591
lesions, 5,7-dihydroxytryptamine, 739
obesity, 591
rauwolscine, 591
serotonin behavioral syndrome, 739
tolerance, 739
yohimbine, 591
Anorexigenics, 317
eating
monkeys
social interactions
Antagonist, 507
clozapine
microinjection
open field
Antidepressants, 391
norepinephrine uptake inhibitors
operant behavior
pigeons
Antinociception, 463
alpha-adrenoceptor agonists
nisoxetine
noradrenaline
Antinociceptive effect, 531
morphine
opioid receptors
pentazocine
Anxiety, 495
benzodiazepines
conditioned emotional response
diazepam
Apomorphine
amphetamine, 181, 855
cathinone, 181
conditioned taste aversion, 507
drug discrimination, 181
drug interaction, 507
ethanol sensitivity, 91
hamsters, 855
locomotor activity, 91, 855
membrane receptor, 575
postural deviation, 575
selective breeding, 91
stereotypy, 91
stimulus properties of drugs, 181
striatum, 575
Apparatus
bilateral cannula assembly, 811
bipolar electrodes, 859
Dashiell maze, 327
microinfusion pump, 959
miniature speaker, 261
multi-dimensional behavioral analyser, 815
radial maze, 659
Approach-avoidance conflict, 343
muricide
pyrazolo[1,5-a]pyramidines
two-chambered exploration tests
Ascorbic acid, 609
amphetamine
push-pull perfusion
striatum
L-Asparaginase, 519
D-aspartic acid
morphine
PLG
vasopressin release
D-Aspartic acid, 519
L-asparaginase
morphine
PLG
vasopressin release
Asymmetries of catecholamines, 327
lateralization
sex differences
turning preference
Atropine, 601
conditioned gustatory avoidance
methamphetamine
Auditory brainstem response, 261
unrestrained rat
Aversion, 175
classical conditioning
withdrawal
Aversion retention, 467
latent inhibition
methadone aversion
taste aversion
Avoidance
$ACTH_{1-17}$ analog, 689
amnesia, 405
cholinergic agonist, 161
cycloheximide, 405
memory, 161, 405
responsiveness to electrical footshock, 689
retention, 161

Behavioral depression, drug-induced, 815
dynorphin A
locomotor activity
naloxone
Behavioral tolerance, 373
differential reinforcement rate
phencyclidine
Behavioral toxicity, 559
cholinergic modifiers
locomotor activity
phencyclidine
Behavioral toxicology, 567
caffeine
inbred mice
locomotor activity
stress
Benzodiazepine receptors
chronic intravenous morphine, 443
diazepam sensitivity, 845
hyponeophagia, 845
intravenous morphine self-administration, 443
muscarinic cholinergic receptors, 443
opiate reinforcement, 443
strain differences, 845
Benzodiazepines
anxiety, 495
gamma-butyrolactone, 307
β-carbolines, 763
conditioned emotional response, 495
diazepam, 495, 715
drug discrimination, 715
eating, 763
fixed-ratio schedules, 715
human studies, males, 233
lever pressing, 307
memory, 233
psychomotor performance, 233
rabbits, 763
retrieval, 233
Ro 15-1788, 763
punishment, 307
stimulus-shock termination, 715
Bilateral cannula assembly, 811
chemical microinjection
chronic implant
intracranial cannula
Biogenic amines
cats, 9
chlordiazepoxide, 9
postnatal cannabinoids, 115
prenatal cannabinoids, 107
successive discrimination, 9
Blood ethanol, 883
adrenalectomy
brain ethanol
open field
Body temperature, 289
analgesia
immobilization
nociception
stress
Bradycardia, 95
amphetamine
discriminative stimulus
drug interactions
LSD
neonatal monoamine reductions
Brain
amygdala, 429, 443
basal ganglia, 551
caudate nucleus, 443, 917
caudate-putamen, 327
central grey, 361
central nervous system, 483, 501, 567, 879
cerebellum, 153, 519, 771
cerebral cortex, 519
cingulate cortex, 443
cortex, 331, 771
dorsal raphe nucleus, 757
frontal cortex, 429, 443
hindbrain, 771
hippocampus, 443, 519, 537, 659, 771, 793
hypothalamus, 473, 519, 771, 829, 841, 947
lateral hypothalamus, 859
limbic system, 331
locus coeruleus, 613
medial forebrain bundle, 361
medial preoptic area, 527
medial preoptic nucleus, 133
median raphe, 507, 859
midbrain, 519, 771
nucleus accumbens, 49, 169, 243, 429, 451, 507
nucleus accumbens septum, 807
olfactory tubercle, 169
periventricular grey, 917
pituitary, 527, 793
pons-medulla, 519
pyriform cortex, 429, 443

striatum, 169, 575, 609, 771, 863
substantia nigra, 893
thalamus, 519, 757
ventral bundle, 473
ventral tegmental area, 429, 451, 917, 925
Brain ethanol, 883
adrenalectomy
blood ethanol
open field
Gamma-butyrolactone, 307
benzodiazepines
lever pressing
punishment

Caffeine
alcohol, 583
amphetamine, 383
behavioral toxicology, 567
cigarette smoking, 583
drug interaction, 383
human studies, 583
inbred mice, 567
locomotor activity, 383, 567
stress, 567
Caffeine stimulation, 707
drug interaction
6-hydroxydopamine
locomotor activity
sex differences
Cannabis, 103
human studies
prolactin levels
route of administration
Cannula fixation, 45
intrathecal catheterization
β-Carbolines, 763
benzodiazepines
eating
rabbits
Ro 15-1788
Catecholamine agonists, 747
amphetamine
catecholamine antagonists
play fighting
Catecholamine antagonists, 747
amphetamine
catecholamine agonists
play fighting
Catecholamine alteration, 133
norepinephrine
phenylethylamine
sexual behavior, male rats
Catecholamines
dopamine uptake, 105
mammalian alkaloids, 355
salsolinol, 105
strain differences, 105
vasopressin, 355
Cathinone, 181
amphetamine
apomorphine
drug discrimination
stimulus properties of drugs
dl-Cathinone, 721
d-amphetamine
cocaine
conditioned avoidance responding
haloperidol
methysergide

Cats
affective defense, 841
aggression, 841
biogenic amines, 9
chlordiazepoxide, 9
cortical evoked potential, 79
electrical stimulation, 841
hypothalamus, 841
kainic acid, 79
retinal toxicity, 79
successive discrimination, 9
Central self-administration, 959
microinfusion pump
nanoliter drug injections
^{14}C-nicotine diffusion
subcortical drug administration
Cerebellectomy, 153
ethanol sensitivity
sleep time
strain differences
Chemical microinjection, 811
bilateral cannula assembly
chronic implant
intracranial cannula
Chickens
ACTH, 681
adrenoceptors, 731
animal hypnosis, 731
naloxone, 681
stress, 681
tonic immobility, 731
Chlordiazepoxide
biogenic amines, 9
cats, 9
deprivation level, 39
drinking, 39, 869
eating, 39
ethanol, 849
fixed time schedule, 39
Ro 15-1788, 869
salt intake, 869
schedule induction, 849
successive discrimination, 9
p-Chlorophenylalanine, 337
copulatory pacing
sexual behavior, female rats
Choice testing, 195
halogenated hydrocarbons
palatability
Cholecystokinin, 23
exploration
habituation
novel environment
Cholinergic agonist
avoidance, 161
drug interaction, 205
memory, 161
monoaminergic antagonists, 205
retention, 161
spatial memory, 205
Cholinergic mediation, 301
adrenergic mediation
drug interaction
subfornical organ
Cholinergic modifiers, 559
behavioral toxicity
locomotor activity
phencyclidine
Cholinergic neurons, 659
radial maze
reference memory
scopolamine
working memory
Cholinergic receptors, 771
scopolamine
tolerance
Cholinesterase inhibitors, 951
diisopropylfluorophosphate (DFP)
locomotor activity
Chronic antidepressant treatment, 425
animal model
serotonergic receptors
trazodone
Chronic implant, 811
bilateral cannula assembly
chemical microinjection
intracranial cannula
Chronic intravenous morphine
acetylcholine turnover rates, 429
benzodiazepine receptors, 443
intravenous morphine self-administration, 429, 443
muscarinic cholinergic receptors, 443
opiate reinforcement, 429, 443
Cigarette deprivation, 55
human studies
nicotine preference
satiation
tobacco
Cigarette smoking
alcohol, 583
caffeine, 583
human studies, 583, 965
self-administration, 965
Cimetidine, 63
fixed ratio schedule
locomotor activity
schedule-controlled responding
Circadian variation, 247
ambulation-increasing effect
methamphetamine
reverse tolerance
Classical conditioning, 175
aversion
withdrawal
Clonidine
drug discrimination, 669
drug interaction, 943
goldfish, 887
morphine, 669
prostaglandin, 887
self-injurious behavior, 943
sexual behavior, female goldfish, 887
spawning behavior, 887
Clozapine, 507
antagonist
microinjection
open field
CNS stimulants, 501
drug discrimination
hallucinogens
Coca, 819
cocaine
local anesthesia
Cocaine
d-amphetamine, 721
dl-cathinone, 721
coca, 819
conditioned avoidance responding, 721
haloperidol, 721
heroin, 917
local anesthesia, 819

methysergide, 721
morphine, 917
priming, 917
self-administration, 917
Cockroaches, 479
learning
retention
scopolamine
Cold water swim, 631
analgesia
morphine
stress
stress-tolerance
Concurrent schedules, 973
reinforcement schedules
self-administration
sucrose
Conditioned avoidance response
d-amphetamine, 721
dl-cathinone, 721
cocaine, 721
discrimination, 49
dopamine, 49
haloperidol, 721
methysergide, 721
nucleus accumbens, 49
Conditioned emotional response, 495
anxiety
benzodiazepines
diazepam
Conditioned gustatory avoidance, 601
atropine
methamphetamine
Conditioned taste aversion
amphetamine, 643
apomorphine, 507
drinking, 835
drug interaction, 507
eating, 835
gastric emptying, 835
lithium chloride, 643
peripheral serotonin, 835
Continuous amphetamine administration, 367
acoustic startle
dopamine receptors
intermittent amphetamine treatment
Copulatory behavior, 69
dopamine receptors
premature ejaculation
Copulatory pacing, 337
p-chlorophenylalanine
sexual behavior, female rats
Copulatory pattern, male rat, 185
pelvic thrusting
serotoninomimetic drugs
Cortical evoked potential, 79
cats
kainic acid
retinal toxicity
Corticosterone, 221
cross-adaptation
nicotine
pituitary-adrenocortical response
stress
Cross-adaptation, 221
corticosterone
nicotine
pituitary-adrenocortical response
stress
Cyclic AMP, 793
habituation
lesions, hippocampus
stress
Cycloheximide, 405
amnesia
avoidance
memory

Defensive responses, 349
aggression
agonistic behavior
animals
Deprivation level, 39
chlordiazepoxide
drinking
eating
fixed time schedule
Developmental toxicity, 251
locomotor activity
prenatal exposure, phencyclidine
Diazepam
anxiety, 495
benzodiazepines, 495, 715
conditioned emotional response, 495
drug discrimination, 715
fixed-ratio schedules, 715
stimulus-shock termination, 715
Diazepam sensitivity, 845
benzodiazepine receptors
hyponeophagia
strain differences
Differential reinforcement rate, 373
behavioral tolerance
phencyclidine
Diisopropylfluorophosphate (DFP), 951
cholinesterase inhibitors
locomotor activity
Discrimination
conditioned avoidance response, 49
dissociative anesthetics, 209
dopamine, 49
para-methoxyamphetamine, 201
nucleus accumbens, 49
phencyclidine, 209
rhesus monkeys, 209
stimulus control, 201
Discriminative stimulus, 95
amphetamine
bradycardia
drug interactions
LSD
neonatal monoamine reductions
Dissociative anesthetics, 209
discrimination
phencyclidine
rhesus monkeys
DOPAC, 943
eating
hypothalamic dopamine metabolism
Dopamine
conditioned avoidance response, 49
discrimination, 49
estrous cycle, 551
nucleus accumbens, 49
postural deviation, 551
rotation, 551
shock-induced fighting, 331
social factors, 331
stress, 331
Dopamine receptors
acoustic startle, 367
continuous amphetamine administration, 367
copulatory, behavior, 69
intermittent amphetamine treatment, 367
premature ejaculation, 69
Dopamine uptake, 105
catecholamines
salsolinol
strain differences
Dorsal raphe nucleus, 757
serotonin metabolism
sleep deprivation
thalamus
Drinking
adrenergic mediation, 301
amino acids, 29
chlordiazepoxide, 39, 869
choice testing, 195
cholinergic mediation, 301
conditioned taste aversion, 835
deprivation level, 39
drug interaction, 301
fixed time schedule, 39
food deprivation, 145
gastric emptying, 835
halogenated hydrocarbons, 195
locomotor activity, 1
oral drug self-administration, 779
palatability, 195
peripheral serotonin, 835
phencyclidine, 779
β-phenylethylamine, 1
rhesus monkeys, 145, 779
Ro 15-1788, 869
salt intake, 869
second-order schedules, 779
self-administration, 145
subfornical organ, 301
urine osmolality, 29
water deprivation, 1
Drug
aceperone, 893
acetaldehyde, 281
acetylcholine, 85, 659, 899
l-α-acetylmethadol, 543
adenosine, 943
alcohol, 293, 349, 583, 639, 841, 883
alprazolam, 233
amfonelic acid, 635
amitriptyline, 391, 425
amphetamine, 73, 181, 387, 397, 501, 551, 609, 635, 643, 747, 893
d-amphetamine, 95, 137, 227, 255, 367, 383, 415, 489, 619, 721, 855
anisomycin, 405
apomorphine, 69, 91, 181, 397, 457, 507, 575, 747, 855
arecoline hydrobromide, 161
ascorbic acid, 609
L-asparaginase, 519
D-aspartic acid, 29, 519
L-aspartic acid, 29
atropine, 301, 559, 899
azapetine, 893
gamma-butyrolactone, 307
caffeine, 383, 387, 567, 583
cannabidiol, 107, 115
carbachol, 301, 899
carbamazepine, 803
β-carbolines, 763
cathinone, 181

dl-cathinone, 721
p-chloramphetamine, 215
chlordiazepoxide, 9, 205, 311, 543, 849, 869
chlordiazepoxide hydrochloride, 39
chlorimipramine, 391
p-chlorophenylalanine, 653
chlorpromazine, 205, 311, 747, 763, 859
cimetidine, 63
clonidine, 463, 591, 669, 731, 747, 887, 935, 943
cloazpine, 507
cocaine, 721, 819, 917
cycloheximide, 405
cyclohexyladenosine, 943
cyproheptadine, 715, 763
decamethonium, 85
desipramine, 391
desmethylimipramine, 95, 707
dexamethasone, 663, 879
diazepam, 495, 715, 763, 845
diethylpropion, 317
dihydroxyphenylacetic acid, 951
5,7-dihydroxytryptamine, 95
diisopropylfluorophosphate (DFP), 951
dimethyl-phenyl-piperazinium, 85
dipyridamole, 943
DOM, 501
domperidone, 507
L-DOPA, 69
dopamine, 9, 49, 215, 281, 473, 551, 575, 807, 925, 951
doxepin, 391
DSP-4, 613
ephedrine, 747
ethanol, 91, 105, 281, 349, 649, 789, 841, 849, 883, 973
fenfluramine, 317, 739
d-fenfluramine, 489
flurazepam, 715
1-fluoromethyl-2-p-chlorophenyl-ethylamine, 215
fluoxetine, 391, 463
gallamine, 85
guanfacine, 731
haloperidol, 69, 323, 379, 543, 721, 747
hemicholinium-3, 829
heroin, 807, 917
hexamethonium, 301
gamma-hydroxybutyrate, 307
6-hydroxydopamine, 95, 457, 707, 893
5-hydroxytryptamine, 95, 201, 859
5-hydroxytryptophan, 425
l-5-hydroxytryptophan, 799
imipramine, 979
irpindole, 391
isoproterenol, 301
kainic acid, 79, 243
D-leucine, 29
lisuride, 69
lithium chloride, 643
lobeline, 899
lorazepam, 233
LSD, 95
lysergic acid diethylamide, 201
magnesium, 243
marihuana, 103
McNeil 4612, 227
mecamylamine, 899
meprobamate, 311
metergoline, 701, 835, 859
methadone, 467, 543
methamphetamine, 247, 457, 601, 803
methionine enkephalin, 451
methohexital, 145
methoxamine, 731
methoxyethanol, 269
N-methyl-aspartic acid, 243
methylazoxymethanol, 189
2-methyl-3,3-diphenyl-3-propanolamine, 209
3,4-methylenedioxyamphetamine, 501
methylphenidate, 227, 317, 397, 601, 747
α-methyl-p-tyrosine, 49
methylscopolamine, 205
alpha-methyltyrosine, 747
methysergide, 721, 835, 893
mianserin, 425
morphine, 29, 59, 175, 429, 443, 463, 519, 531, 631, 669, 683, 767, 879, 917, 925
nabilone, 103
naloxone, 29, 59, 289, 361, 379, 451, 483, 669, 681, 683, 815, 925
naltrexone, 35, 467, 483, 675, 767, 911, 917
naltrexone methyl bromide, 483
naphazoline, 731
nicotine, 55, 221, 507, 559, 807, 899, 965
nisoxetine, 391, 463
noradrenaline, 9, 215, 301, 473
norepinephrine, 391
nortriptyline, 391
8-OH-DPAT, 185
oxazepam, 311
oxotremorine, 771
pancuronium, 85
para-chlorophenylalanine, 337
para-methoxyamphetamine, 201
pentazocine, 531, 697
pentobarbital, 23, 137, 145, 307, 543, 715
pergolide, 69
phencyclidine, 137, 145, 209, 379, 543, 559, 619, 779
phencyclidine hydrochloride, 251, 373
phenoxybenzamine, 747
phentolamine, 205, 301, 943
D-phenylalanine, 29
phenylephrine, 731
phenylethylamine, 133
β-phenylethylamine, 1
L-phenylisopropyladenosine, 943
phenytoin, 803
physostigmine, 397, 559
pimozide, 73, 473, 507, 925
pizotyline, 201
prazosin, 731, 935
prolyl-leucyl-glycinamide, 29, 519
propranolol, 205, 301, 747, 935
N-n-propyl-norapomorphine, 69
prostaglandin, 887
protriptyline, 391
quinine, 195
quipazine, 701, 739
quisqualic acid, 243
rauwolscine, 591
reserpine, 215
Ro 4-4602, 799
Ro 15-1788, 763, 869
salsolinol, 105, 281
scopolamine, 205, 479, 659, 771
serotonin, 9, 95, 215, 391
sucrose, 973
Δ^9-tetrahydrocannabinol, 103, 107, 115, 457, 547
tetrahydroisoquinoline, 281
theophylline, 943
trazodone, 425
tripelennamine, 697
d-tubocurarine, 85
viminol, 59
xylazine, 463
yohimbine, 591, 669, 731
Drug discrimination
amfonelic acid, 635
amphetamine, 181, 635
apomorphine, 181
benzodiazepines, 715
cathinone, 181
clonidine, 669
CNS stimulants, 501
diazepam, 715
fixed-ratio schedules, 715
hallucinogens, 501
morphine, 669
operant behavior, 59
stimulus properties of drugs, 181
stimulus-shock termination, 715
viminol R_2 isomer, 59
Drug interaction
l-α-acetylmethadol, 543
adrenergic mediation, 301
amphetamine, 95, 383
d-amphetamine, 95, 619
apomorphine, 507
bradycardia, 95
caffeine, 383
caffeine stimulation, 707
cholinergic antagonists, 205
cholinergic mediation, 361
clonidine, 943
conditioned taste aversion, 507
discriminative stimulus, 95
excitatory amino acids, 243
fixed ratio schedule, 137
haloperidol, 379
6-hydroxydopamine, 707
hypermotility, 243
interresponse-time-greater-than-t schedule, 697
locomotor activity, 383, 387, 707
LSD, 95
magnesium, 243
methamphetamine, 803
milk intake, 379
monkeys, 619
monoaminergic antagonists, 205
mouse killing, 311
naloxone, 379
neonatal monoamine reductions, 95
operant behavior, 697
oxazepam, 311
pentazocine, 697
phencyclidine, 379, 619
phenytoin, 803
repeated acquisition, 619
rhesus monkeys, 137
self-administration, 137
self-injurious behavior, 943
sex differences, 707
spatial memory, 205
stereotypy, 397, 803

stimulants, 387, 397
subfornical organ, 301
tolerance, 387
tremor, 803
tripelennamine, 697
Drug specificity, 899
high affinity binding sites
multiple nicotine binding sites
nicotine
nicotine stereospecificity
DSP-4, 613
exploration
locus coeruleus projections
neurotoxins
open field
Dynorphin A, 815
behavioral depression, drug-induced
locomotor activity
naloxone

Eating
amino acids, 29
anorexia, 591
anorexigenics, 317
benzodiazepines, 763
β-carbolines, 763
chlordiazepoxide, 39
conditioned taste aversion, 835
deprivation level, 39
DOPAC, 947
endogenous opiates, 675
endorphins, 911
energy metabolism, 911
fixed time schedule, 39
food deprivation, 145
gas exchange, 911
gastric emptying, 835
hoarding, 35
hyperphagia, 675
hypothalamic dopamine metabolism, 947
monkeys, 317
naltrexone, 35, 911
obesity, 591, 911
peripheral serotonin, 835
rabbits, 763
rauwolscine, 591
rhesus monkeys, 145
Ro 15-1788, 763
self-administration, 145
social interactions, 317
stress, 675
urine osmolality, 29
white-footed mice, 35
yohimbine, 591
Electrical stimulation, 841
affective defense
aggression
cats
hypothalamus
Electroconvulsive shock, 767
β-endorphin
seizures
Endogenous opiate peptides, 451
intracranial self-administration
opiate receptors
opiate reinforcement
methionine enkephalin
nucleus accumbens

Endogenous opiates
eating, 675
hyperphagia, 675
intracranial self-stimulation, 361
naloxone, 361
stress, 675
Endorphins, 911
eating
energy metabolism
gas exchange
naltrexone
obesity
β-Endorphin, 767
electroconvulsive shock
seizures
Energy metabolism, 911
eating
endorphins
gas exchange
naltrexone
obesity
17-β Estradiol, 293
alcohol, acute
luteinizing hormone
macaque monkeys
Estrous cycle, 551
dopamine
postural deviation
rotation
Ethanol
ambient temperature, 649
chlordiazepoxide, 849
hyperglycemia, 649
hypoglycemia, 649
learning, 789
schedule induction, 849
spinal reflex, 789
tail flick, 789
tolerance, 789
Ethanol elimination, 281
activity
hypothermia
salsolinol
strain differences
Ethanol sensitivity
apomorphine, 91
cerebellectomy, 153
locomotor activity, 91
selective breeding, 91
sleep time, 153
stereotypy, 91
strain differences, 153
Exercise, 863
oxidative capacity
[^{3}H]-spiperone binding
striatum
Excitatory amino acids, 243
drug interaction
hypermotility
magnesium
Exploration
cholecystokinin, 23
DSP-4, 613
habituation, 23
locomotor activity, 215
locus coeruleus projections, 613
neurotoxins, 613
novel environment, 23
open field, 215, 613
para-chloroamphetamine, 215

Feeding, 829
hemicholinium-3
irritability
muricide
Fenfluramine, 489
amphetamine
food reward
maze performance
Finite differences method, 169
acetylcholine
mesolimbic areas
two compartment analysis
Fixed ratio schedule
benzodiazepines, 715
cimetidine, 63
diazepam, 715
drug discrimination, 715
drug interaction, 137
locomotor activity, 63
rhesus monkeys, 137
schedule-controlled responding, 63
self-administration, 137
stimulus-shock termination, 715
Fixed time schedule, 39
chlordiazepoxide
deprivation level
drinking
eating
Food deprivation, 145
drinking
eating
rhesus monkeys
self-administration
Food reward, 489
amphetamine
fenfluramine
maze performance

Gas exchange, 911
eating
endorphins
energy metabolism
naltrexone
obesity
Gastric emptying, 835
conditioned taste aversion
drinking
eating
peripheral serotonin
Glucocorticoids, 879
ACTH
morphine sensitivity
striatal DOPAC
Goldfish, 887
clonidine
prostaglandin
sexual behavior, female goldfish
spawning behavior

Habenula, 859
self-stimulation
serotonergic receptor blocking agent
serotonin
Habituation
acoustic startle, 935
alpha-adrenergic receptors, 935
beta-adrenergic receptors, 935
cholecystokinin, 23

cyclic AMP, 793
exploration, 23
habituation, 935
hypotension, 935
lesions, hippocampus, 793
novel environment, 23
stress, 793
Hallucinogens, 501
CNS stimulants
drug discrimination
Halogenated hydrocarbons, 195
choice testing
palatability
Haloperidol
d-amphetamine, 721
dl-cathinone, 721
cocaine, 721
conditioned avoidance responding, 721
drug interactions, 379
lever-pressing, 323
methysergide, 721
milk intake, 379
naloxone, 379
neuroleptic drugs, 323
operant responding, 323
phencyclidine, 379
Hamsters, 855
amphetamine
apomorphine
locomotor activity
Hemicholinium-3, 829
feeding
irritability
muricide
Hepatic encephalopathy, 875
locomotor activity
portacaval anastomosis
Heroin, 917
cocaine
morphine
priming
self-administration
Heroin self injection, 807
lesions, 6-OHDA
nicotine self injection
schedule-induced self injection
High affinity binding sites, 899
drug specificity
multiple nicotine binding sites
nicotine
nicotine stereospecificity
Hoarding, 35
eating
naltrexone
white-footed mice
Hormone
corticosterone, 793
17-β estradiol, 293
estrogen, 575
luteinizing hormone, 293
prolactin, 793
testosterone, 107, 115
Human studies
alcohol, 583, 639
caffeine, 583
cannabis, 103
cigarette smoking, 583, 965
cigarette deprivation, 55
memory, 639
nicotine preference, 55
prolactin levels, 103
retrograde enhancement, 639
route of administration, 103
satiation, 55
self-administration, 965
tobacco, 55
Human studies, males, 233
benzodiazepines
memory
psychomotor performance
retrieval
6-Hydroxydopamine
caffeine stimulation, 707
drug interaction, 707
irritable aggression, 457
locomotor activity, 707
sex differences, 707
Δ^9-tetrahydrocannabinol, 457
5-Hydroxytryptamine, 799
l-5-hydroxytryptophan
taste aversion
l-5-Hydroxytryptophan, 799
5-hydroxytryptamine
taste aversion
Hyperactivity
lesions, ventral bundle, 473
locomotor activity, 473
methylazoxymethanol, 189
microcephaly, 189
open field, 473
pimozide, 473
Hyperglycemia, 649
ambient temperature
ethanol
hypoglycemia
Hypermotility, 243
drug interaction
excitatory amino acids
magnesium
Hyperphagia, 675
eating
endogenous opiates
stress
Hypoactivity, 483
anaphylaxis
opiate antagonist
Hypoglycemia, 649
ambient temperature
ethanol
hyperglycemia
Hyponeophagia, 845
benzodiazepine receptors
diazepam sensitivity
strain differences
Hypotension, 935
acoustic startle
alpha-adrenergic receptors
beta-adrenergic receptors
habituation
Hypothalamic dopamine metabolism, 947
DOPAC
eating
Hypothalamus, 841
affective defense
aggression
cats
electrical stimulation
Hypothermia, 281
activity
ethanol elimination
salsolinol
strain differences

Imipramine, 979
animal model of depression
rhesus monkeys
separation-induced vocalizations
Immobilization, 289
analgesia
body temperature
nociception
stress
Inbred mice, 567
behavioral toxicology
caffeine
locomotor activity
stress
Industrial solvents, 269
methoxyethanol
neurochemical deviation
occupational exposure
Intermittent amphetamine treatment, 367
acoustic startle
continuous amphetamine administration
dopamine receptors
Interresponse-time-greater-than-t schedule, 697
drug interactions
operant behavior
pentazocine
tripelennamine
Intracranial cannula, 811
bilateral cannula assembly
chemical microinjection
chronic implant
Intracranial self-administration, 451
endogenous opiate peptides
methionine enkephalin
nucleus accumbens
opiate receptors
opiate reinforcement
Intracranial self-stimulation, 361
endogenous opiates
naloxone
Intrathecal catheterization, 45
cannula fixation
Intravenous morphine self-administration
acetylcholine turnover rates, 429
benzodiazepine receptors, 443
chronic intravenous morphine, 429, 443
muscarinic cholinergic receptors, 443
opiate reinforcement, 429, 443
Irritability, 829
feeding
hemicholinium-3
muricide
Irritable aggression, 457
6-hydroxydopamine
Δ^9-tetrahydrocannabinol

Kainic acid, 79
cats
cortical evoked potential
retinal toxicity

Latent inhibition, 467
aversion retention
methadone aversion
taste aversion
Lateralization, 327
asymmetries of catecholamines
sex differences
turning preference
Learning
cockroaches, 479
ethanol, 789
retention, 479
scopolamine, 479
spinal reflex, 789
tail flick, 789
tolerance, 789
Lesions, 5,7-dihydroxytryptamine, 739
anorexia
serotonin behavioral syndrome
tolerance
Lesions, electrolytic, 537
lesions, hippocampal
lesions, 6-hydroxydopamine
schedule-induced drinking
Lesions, hippocampal
cyclic AMP, 793
habituation, 793
lesions, electrolytic, 537
lesions, 6-hydroxydopamine, 537
schedule-induced drinking, 537
stress, 793
Lesions, 6-hydroxydopamine
α_1-adrenoceptors, 893
heroin self injection, 807
lesions, electrolytic, 537
lesions, hippocampal, 537
MK-801, 893
nicotine self injection, 807
schedule-induced drinking, 537
schedule-induced self injection, 807
Lesions, ventral bundle, 473
hyperactivity
locomotor activity
open field
pimozide
Lever pressing
benzodiazepines, 307
gamma-butyrolactone, 307
haloperidol, 323
neuroleptic drugs, 323
operant responding, 323
punishment, 307
LH-RH antiserum, 527
luteinizing-hormone releasing hormone
sexual behavior, female rats
Lithium chloride, 643
amphetamine
conditioned taste aversion
Local anesthesia, 819
coca
cocaine
Locomotor activity
amphetamine, 383, 855
apomorphine, 91, 855
behavioral depression, drug-induced, 815
behavioral toxicity, 559
behavioral toxicology, 567
caffeine, 383, 567
caffeine stimulation, 707
cholinergic modifiers, 559
cholinesterase inhibitors, 951
cimetidine, 63
developmental toxicity, 251
diisopropylfluorophosphate (DFP), 951
drinking, 1
drug interaction, 383, 387, 707
dynorphin A, 815
ethanol sensitivity, 91
exploration, 215
fixed ratio schedule, 63
hamsters, 855
hepatic encephalopathy, 875
6-hydroxydopamine, 707
hyperactivity, 473
inbred mice, 567
lesions, ventral bundle, 473
metergoline, 701
morphine, 925
naloxone, 815
open field, 215, 473
para-chloroamphetamine, 215
phencyclidine, 559
β-phenylethylamine, 1
pimozide, 473
portacaval anastomosis, 875
prenatal exposure, phencyclidine, 251
quipazine, 701
schedule-controlled responding, 63
selective breeding, 91
sensitization, 925
sex differences, 707
stereotypy, 91
stimulants, 387
stress, 567
tolerance, 387
ventral tegmental area, 925
water deprivation, 1
Locus coeruleus projections, 613
DSP-4
exploration
neurotoxins
open field
LSD, 95
amphetamine
bradycardia
discriminative stimulus
drug interactions
neonatal monoamine reductions
Luteinizing hormone, 293
alcohol, acute
17-β estradiol
macaque monkeys
Luteinizing-hormone releasing hormone, 527
LH-RH antiserum
sexual behavior, female rats

Macaque monkeys, 293
alcohol, acute
17-β estradiol
luteinizing hormone
Magnesium, 243
drug interaction
excitatory amino acids
hypermotility
Mammalian alkaloids, 355
catecholamines
vasopressin
Maze performance, 489
amphetamine
fenfluramine
food reward
McNeil 4612, 227
d-amphetamine
methylphenidate
self-administration
Membrane receptor, 575
apomorphine
postural deviation
striatum
Memory
alcohol, 639
amnesia, 405
avoidance, 161, 405
benzodiazepines, 233
cholinergic agonist, 161
cycloheximide, 405
human studies, 233, 639
psychomotor performance, 233
retention, 161
retrieval, 233
retrograde enhancement, 639
Mesolimbic areas, 169
acetylcholine
finite differences method
two compartment analysis
Metergoline, 701
locomotor activity
quipazine
Methadone aversion, 467
aversion retention
latent inhibition
taste aversion
Methamphetamine
ambulation-increasing effect, 247
atropine, 601
circadian variation, 247
conditioned gustatory avoidance, 601
drug interaction, 803
phenytoin, 803
reverse tolerance, 247
stereotypy, 803
tremor, 803
Methionine enkephalin, 451
endogenous opiate peptides
intracranial self-administration
opiate receptors
opiate reinforcement
nucleus accumbens
Method
finite differences method, 169
radial arm maze, 205
two compartment analysis, 169
Methoxyethanol, 269
industrial solvents
neurochemical deviation
occupational exposure
Methylazoxymethanol, 189
hyperactivity
microcephaly
Methylphenidate, 227
d-amphetamine
McNeil 4612
self-administration
Methysergide, 721
d-amphetamine
dl-cathinone
cocaine
conditioned avoidance responding
haloperidol
Microcephaly, 189
hyperactivity
methylazoxymethanol

Microinfusion pump, 959
central self-administration
nanoliter drug injections
^{14}C-nicotine diffusion
subcortical drug administration
Microinjection, 507
antagonist
clozapine
open field
MIF-1, 629
activity
Siamese fighting fish
Milk intake, 379
drug interactions
haloperidol
naloxone
phencyclidine
MK-801, 893
α_1-adrenoceptors
lesions, 6-hydroxydopamine
Monkeys
affiliative behavior, 255
aggressive behavior, 255
d-amphetamine, 255, 619
anorexigenics, 317
drug interaction, 619
eating, 317
phencyclidine, 619
repeated acquisition, 619
social interactions, 317
Monoaminergic antagonists, 205
cholinergic antagonists
drug interaction
spatial memory
Morphine
analgesia, 631
antinociceptive effect, 531
L-asparaginase, 519
D-aspartic acid, 519
clonidine, 669
cocaine, 917
cold water swim, 631
drug discrimination, 669
heroin, 917
locomotor activity, 925
naloxone, 683
opiate receptor, 683
opioid receptors, 531
pentazocine, 531
PLG, 519
praying mantis, 683
priming, 917
self-administration, 917
sensitization, 925
stress, 631
stress-tolerance, 631
vasopressin release, 519
ventral tegmental area, 925
Morphine sensitivity, 879
ACTH
glucocorticoids
striatal DOPAC
Multiple nicotine binding sites, 899
drug specificity
high affinity binding sites
nicotine
nicotine stereospecificity
Muricide
approach-avoidance conflict, 343
drug interaction, 311
feeding, 829
hemicholinium-3, 829
irritability, 829
oxazepam, 311
pyrazolo[1,5-a]pyrimidines, 343
two-chambered exploration tests, 343
Muscarinic cholinergic receptors, 443
benzodiazepine receptors
chronic intravenous morphine
intravenous morphine self-administration
opiate reinforcement

Naloxone
ACTH, 681
behavioral depression, 815
chickens, 681
drug interactions, 379
dynorphin A, 815
endogenous opiates, 361
haloperidol, 379
intracranial self-stimulation, 361
locomotor activity, 815
milk intake, 379
morphine, 683
opiate receptor, 683
phencyclidine, 379
praying mantis, 683
stress, 681
Naltrexone
eating, 35, 911
endorphins, 911
energy metabolism, 911
gas exchange, 911
hoarding, 35
obesity, 911
white-footed mice, 35
Nanoliter drug injections, 959
central self-administration
microinfusion pump
^{14}C-nicotine diffusion
subcortical drug administration
Neonatal monoamine reductions, 95
amphetamine
bradycardia
discriminative stimulus
drug interactions
LSD
Neurochemical deviation, 269
industrial solvents
methoxyethanol
occupational exposure
Neuroleptic drugs, 323
haloperidol
lever-pressing
operant responding
Neuromuscular blockers, 85
vagolytic
Neurotoxins, 613
DSP-4
exploration
locus coeruleus projections
open field
Nicotine
corticosterone, 221
cross-adaptation, 221
drug specificity, 899
high affinity binding sites, 899
multiple nicotine binding sites, 899
nicotine stereospecificity, 899
pituitary-adrenocortical response, 221
stress, 221

^{14}C-nicotine diffusion, 959
central self-administration
microinfusion pump
nanoliter drug injections
subcortical drug administration
Nicotine preference, 55
cigarette deprivation
human studies
satiation
tobacco
Nicotine self injection, 807
heroin self injection
lesions, 6-OHDA
schedule-induced self injection
Nicotine stereospecificity, 899
drug specificity
high affinity binding sites
multiple nicotine binding sites
nicotine
Nisoxetine, 463
alpha-adrenoceptor agonists
antinociception
noradrenaline
Nociception, 289
analgesia
body temperature
immobilization
stress
Noradrenaline, 463
alpha-adrenoceptor agonists
antinociception
nisoxetine
Norepinephrine, 133
catecholamine alteration
phenylethylamine
sexual behavior, male rats
Norepinephrine uptake inhibitors, 391
antidepressants
operant behavior
pigeons
Novel environment, 23
cholecystokinin
exploration
habituation
Nucleus accumbens
conditioned avoidance response, 49
discrimination, 49
dopamine, 49
endogenous opiate peptides, 451
intracranial self-administration, 451
opiate receptors, 451
opiate reinforcement, 451
methionine-enkephalin, 451

Obesity
anorexia, 591
eating, 591, 911
endorphins, 911
energy metabolism, 911
gas exchange, 911
naltrexone, 911
rauwolscine, 591
yohimbine, 591
Occupational exposure, 269
industrial solvents
methoxyethanol
neurochemical deviation
Open field
adrenalectomy, 883
antagonist, 507

blood ethanol, 883
brain ethanol, 883
clozapine, 507
DSP-4, 613
exploration, 215, 613
hyperactivity, 473
lesions, ventral bundle, 473
locomotor activity, 215, 473
locus coeruleus projections, 613
microinjection, 507
neurotoxins, 613
para-chloroamphetamine, 215
pimozide, 473
Operant behavior
amphetamine cumulation, 415
antidepressants, 391
drug discrimination, 59
drug interactions, 697
haloperidol, 323
interresponse-time- greater-than-t schedule, 697
lever-pressing, 323
neuroleptic drugs, 323
norepinephrine uptake inhibitors, 391
pentazocine, 697
pigeons, 391
tolerance, 415
tripelennamine, 697
viminol R_2 isomer, 59
Opiate antagonist, 483
anaphylaxis
hypoactivity
Opiate receptors
endogenous opiate peptides, 451
intracranial self-administration, 451
methionine enkephalin, 451
morphine, 683
naloxone, 683
nucleus accumbens, 451
opiate reinforcement, 451
praying mantis, 683
Opiate reinforcement
acetylcholine turnover rates, 429
benzodiazepine receptors, 443
chronic intravenous morphine, 429, 443
endogenous opiate peptides, 451
intracranial self-administration, 451
intravenous morphine self-administration, 429, 443
methionine enkephalin, 451
nucleus accumbens, 451
muscarinic cholinergic receptors, 443
opiate receptors, 451
Opioid receptors, 531
antinociceptive effect
morphine
pentazocine
Oral drug self-administration, 779
drinking
phencyclidine
rhesus monkeys
second-order schedules
Oxazepam, 311
drug interaction
mouse killing
Oxidative capacity, 863
exercise
[^{3}H]-spiperone binding
striatum
Palatability, 195
choice testing
halogenated hydrocarbons
Para-chloroamphetamine, 215
exploration
locomotor activity
open field
Para-methoxyamphetamine, 201
discrimination
stimulus control
Passive avoidance, 663
pituitary-adrenocortical system
sex differences
Pelvic thrusting, 185
copulatory pattern, male rat
serotoninomimetic drug
Pentazocine
antinociceptive effect, 531
drug interactions, 697
interresponse-time- greater-than-t schedule, 697
morphine, 531
operant behavior, 697
opioid receptors, 531
tripelennamine, 697
Peptides
ACTH, 681, 689, 879
cholecystokinin, 23
dynorphin A, 815
β-endorphin, 675, 767
[D-Ala^2, D-Leu^5]enkephalin, 767
follicle-stimulating hormone, 107, 115
luteinizing-hormone releasing hormone, 527
MIF-1, 629
thyrotropin releasing hormone, 547
vasopressin, 355, 519
Peripheral serotonin, 835
conditioned taste aversion
drinking
eating
gastric emptying
Phencyclidine
d-amphetamine, 619
behavioral tolerance, 373
behavioral toxicity, 559
cholinergic modifiers, 559
differential reinforcement rate, 373
discrimination, 209
dissociative anesthetics, 209
drinking, 779
drug interaction, 379, 619
haloperidol, 379
locomotor activity, 559
milk intake, 379
monkeys, 619
naloxone, 379
oral drug self-administration, 779
repeated acquisition, 619
rhesus monkeys, 209, 779
second-order schedules, 779
Phenylethylamine, 133
catecholamine alteration
norepinephrine
sexual behavior, male rats
β-Phenylethylamine, 1
drinking
locomotor activity
water deprivation
Phenytoin, 803
drug interaction
methamphetamine
stereotypy
tremor
Pigeons, 391
antidepressants
norepinephrine uptake inhibitors
operant behavior
Pimozide
amphetamine, 73
hyperactivity, 473
lesions, ventral bundle, 473
locomotor activity, 473
open field, 473
reinforcement, 73
reward-summation-functions, 73
Pituitary-adrenocortical response, 221
corticosterone
cross adaptation
nicotine
stress
Pituitary-adrenocortical system, 663
passive avoidance
sex differences
Play fighting, 747
amphetamine
catecholamine agonists
catecholamine antagonists
Portacaval anastomosis, 875
hepatic encephalopathy
locomotor activity
Postnatal cannabinoids, 115
biogenic amines
Postural deviation
apomorphine, 575
dopamine, 551
estrous cycle, 551
membrane receptor, 575
rotation, 551
striatum, 575
Praying mantis, 683
morphine
naloxone
opiate receptor
Premature ejaculation, 69
copulatory behavior
dopamine receptors
Prenatal cannabinoids, 107
biogenic amines
Prenatal exposure, phencyclidine, 251
developmental toxicity
locomotor activity
Priming, 917
cocaine
heroin
morphine
self-administration
Prolactin levels, 103
cannabis
human studies
route of administration
Prolyl-leucyl-glycinamide (PLG), 519
L-asparaginase
D-aspartic acid
morphine
vasopressin release
Prostaglandin, 887
clonidine
goldfish
sexual behavior, female goldfish
spawning behavior
Psychomotor performance, 233
benzodiazepines
human studies

memory
retrieval
Punishment, 307
benzodiazepines
gamma-butyrolactone
lever pressing
Push-pull perfusion, 609
amphetamine
ascorbic acid
striatum
Pyrazolo[1,5-a]pyrimidines, 343
approach-avoidance conflict
muricide
two-chambered exploration tests

Quipazine, 701
locomotor activity
metergoline

Rabbits, 763
benzodiazepines
β-carbolines
eating
Ro 15-1788
Radial maze, 659
cholinergic neurons
reference memory
scopolamine
working memory
Rauwolscine, 591
anorexia
eating
obesity
yohimbine
Reference memory, 659
cholinergic neurons
radial maze
scopolamine
working memory
Reinforcement, 73
amphetamine
pimozide
reward-summation-functions
Reinforcement schedules, 973
concurrent schedules
self-administration
sucrose
Repeated acquisition, 619
d-amphetamine
drug interaction
monkeys
phencyclidine
Responsiveness to electrical footshock, 689
$ACTH_{1-17}$ analog
avoidance
Retention
avoidance, 161
cholinergic agonist, 161
cockroaches, 479
learning, 479
memory, 161
scopolamine, 479
Retinal toxicity, 79
cats
cortical evoked potential
kainic acid
Retireval, 233
benzodiazepines
human studies
memory
psychomotor performance
Retrograde enhancement, 639
alcohol
human studies
memory
Reverse tolerance, 247
ambulation-increasing effect
circadian variation
methamphetamine
Reward-summation-functions, 73
amphetamine
pimozide
reinforcement
Rhesus monkeys
animal model of depression, 979
discrimination, 209
dissociative anesthetics, 209
drinking, 145, 779
drug interaction, 137
eating, 145
fixed ratio schedule, 137
food deprivation, 145
imipramine, 979
oral drug self-administration, 779
phencyclidine, 209, 779
second-order schedules, 779
self-administration, 137, 145
separation-induced vocalizations, 979
Ro 15-1788
benzodiazepines, 763
β-carbolines, 763
chlordiazepoxide, 869
drinking, 869
eating, 763
rabbits, 763
salt intake, 869
Rotation, 551
dopamine
estrous cycle
postural deviation
Route of administration, 103
cannabis
human studies
prolactin levels

Salsolinol
activity, 281
catecholamines, 105
dopamine uptake, 105
ethanol elimination, 281
hypothermia, 281
strain differences, 105, 281
Salt intake, 869
chlordiazepoxide
drinking
Ro 15-1788
Satiation, 55
cigarette deprivation
human studies
nicotine preference
tobacco
Schedule-controlled responding, 63
cimetidine
fixed ratio schedule
locomotor activity
Schedule-induced drinking, 537
lesions, electrolytic
lesions, hippocampal
lesions, 6-hydroxydopamine
Schedule-induced self injection, 807
heroin self injection
lesions, 6-OHDA
nicotine self injection
Schedule induction, 849
chlordiazepoxide
ethanol
Scopolamine
cholinergic neurons, 659
cholinergic receptors, 771
cockroaches, 479
learning, 479
radial maze, 659
reference memory, 659
retention, 479
tolerance, 771
working memory, 659
Second-order schedules, 779
drinking
oral drug self-administration
phencyclidine
rhesus monkeys
Seizures, 767
electroconvulsive shock
β-endorphin
Selective breeding, 91
apomorphine
ethanol sensitivity
locomotor activity
stereotypy
Self-administration
d-amphetamine, 227
cigarette smoking, 965
cocaine, 917
concurrent schedules, 973
drinking, 145
drug interaction, 137
eating, 145
fixed ratio schedule, 137
food deprivation, 145
heroin, 917
human studies, 965
McNeil 4612, 227
methylphenidate, 227
morphine, 917
priming, 917
reinforcement schedules, 973
rhesus monkeys, 137, 145
sucrose, 973
Self-injurious behavior, 943
clonidine
drug interaction
Self-stimulation, 859
habenula
serotonergic receptor blocking agent
serotonin
Sensitization, 925
locomotor activity
morphine
ventral tegmental area
Separation-induced vocalizations, 979
animal model of depression
imipramine
rhesus monkeys
Serotonergic receptor blocking agent, 859
habenula
self-stimulation
serotonin
Serotonergic receptors, 425
animal model
chronic antidepressant treatment
trazodone

Serotonin
amphibians, 653
habenula, 859
self-stimulation, 859
serotonergic receptor blocking agent, 859
sleep-like states, 653
Serotonin behavioral syndrome, 739
anorexia
lesions, 5,7-dihydroxytryptamine
tolerance
Serotonin metabolism, 757
dorsal raphe nucleus
sleep deprivation
thalamus
Serotoninomimetic drugs, 185
copulatory pattern, male rat
pelvic thrusting
Serum thyrotropin, 547
serum thyroxine
serum triiodothyronine
Δ^9-tetrahydrocannabinol
Serum thyroxine, 547
serum thyrotropin
serum triiodothyronine
Δ^9-tetrahydrocannabinol
Serum triiodothyronine, 547
serum thyrotropin
serum thyroxine
Δ^9-tetrahydrocannabinol
Sex differences
asymmetries of catecholamines, 327
caffeine stimulation, 707
drug interaction, 707
6-hydroxydopamine, 707
lateralization, 327
locomotor activity, 707
passive avoidance, 663
pituitary-adrenocortical system, 663
turning preference, 327
Sexual behavior, female goldfish, 887
clonidine
goldfish
prostaglandin
spawning behavior
Sexual behavior, female rats
p-chlorophenylalanine, 337
copulatory pacing, 337
LH-RH antiserum, 527
luteinizing-hormone releasing hormone, 527
Sexual behavior, male rats, 133
catecholamine alteration
norepinephrine
phenylethylamine
Shock-induced fighting, 331
dopamine
social factors
stress
Siamese fighting fish, 629
activity
MIF-1
Sleep deprivation, 757
dorsal raphe nucleus
serotonin metabolism
thalamus
Sleep-like states, 653
amphibians
serotonin
Sleep time, 153
cerebellectomy
ethanol sensitivity
strain differences
Social factors, 331
dopamine
shock-induced fighting
stress
Social interactions, 317
anorexigenics
eating
monkeys
Spatial memory, 205
cholinergic antagonists
drug interaction
monoaminergic antagonists
Spawning behavior, 887
clonidine
goldfish
prostaglandin
sexual behavior, female goldfish
Spinal reflex, 789
ethanol
learning
tail flick
tolerance
[^{3}H]-Spiperone binding, 863
exercise
oxidative capacity
striatum
Stereotypy
apomorphine, 91
drug interaction, 397, 803
ethanol sensitivity, 91
locomotor activity, 91
methamphetamine, 803
phenytoin, 803
selective breeding, 91
stimulants, 397, 803
tremor, 803
Stimulants
drug interaction, 387, 397
locomotor activity, 387
stereotypy, 397
tolerance, 387
Stimulus control, 201
discrimination
para-methoxyamphetamine
Stimulus properties of drugs, 181
amphetaminae
apomorphine
cathinone
drug discrimination
Stimulus-shock termination, 715
benzodiazepines
diazepam
drug discrimination
fixed-ratio schedules
Strain differences
activity, 281
benzodiazepine receptors, 845
catecholamines, 105
cerebellectomy, 153
diazepam sensitivity, 845
dopamine uptake, 105
ethanol administration, 281
ethanol sensitivity, 153
hyponeophagia, 845
hypothermia, 281
salsolinol, 105, 281
sleep time, 153
Stress
ACTH, 681
analgesia, 289, 631
behavioral toxicology, 567
body temperature, 289
caffeine, 567
chickens, 681
cold water swim, 631
corticosterone, 221
cross-adaptation, 221
cyclic AMP, 793
dopamine, 331
eating, 675
endogenous opiates, 675
habituation, 793
hyperphagia, 675
immobilization, 289
inbred mice, 567
lesions, hippocampus, 793
locomotor activity, 567
morphine, 631
naloxone, 681
nicotine, 221
nociception, 289
pituitary-adrenocortical response, 221
shock-induced fighting, 331
social factors, 331
stress-tolerance, 631
Stress-tolerance, 631
analgesia
cold water swim
morphine
stress
Striatal DOPAC, 879
ACTH
glucocorticoids
Striatum
amphetamine, 609
apomorphine, 575
ascorbic acid, 609
exercise, 863
membrane receptor, 575
oxidative capacity, 863
postural deviation, 575
push-pull perfusion, 609
[^{3}H]-spiperone binding, 863
Subcortical drug administration, 959
central self-administration
microinfusion pump
nanoliter drug injections
^{14}C-nicotine diffusion
Subfornical organ, 301
adrenergic mediation
cholinergic mediation
drug interaction
Successive discrimination, 9
biogenic amines
cats
chlordiazepoxide
Sucrose, 973
concurrent schedules
reinforcement schedules
self-administration

Tail flick, 789
ethanol
learning
spinal reflex
tolerance
Taste aversion
aversion retention, 467
5-hydroxytryptamine, 799

l-5-hydroxytryptophan, 799
latent inhibition, 467
methadone aversion, 467
Δ^9-Tetrahydrocannabinol
6-hydroxydopamine, 457
irritable aggression, 457
serum thyrotropin, 547
serum thyroxine, 547
serum triiodothyronine, 547
Thalamus, 757
dorsal raphe nucleus
serotonin metabolism
sleep deprivation
Tobacco, 55
cigarette deprivation
human studies
nicotine preference
tobacco
Tolerance
amphetamine cumulation, 415
anorexia, 739
cholinergic receptors, 771
drug interaction, 387
ethanol, 789
learning, 789
lesions, 5,7-dihydroxytryptamine, 739
locomotor activity, 387
operant behavior, 415
scopolamine, 771
serotonin behavioral syndrome, 739
spinal reflex, 789
stimulants, 387
tail flick, 789
Tonic immobility, 731
adrenoceptors
animal hypnosis
chickens
Trazodone, 425
animal model
chronic antidepressant treatment
serotonergic receptors
Tremor, 803
drug interaction
methamphetamine
phenytoin
stereotypy
Tripelennamine, 697
drug interactions
interresponse-time-greater-than-t schedule
operant behavior
pentazocine
Turning preference, 327
asymmetries of catecholamines
lateralization
sex differences
Two-chambered exploration tests, 343
approach-avoidance conflicts
muricide
pyrazolo[1,5-a]pyrimidines
Two compartment analysis, 169
acetylcholine
finite differences method
mesolimbic areas

Unrestrained rat, 261
auditory brainstem response
Urine osmolality, 29
amino acids
drinking
eating

Vagolytic, 85
neuromuscular blockers
Vasopressin, 355
catecholamines
mammalian alkaloids
Vasopressin release, 519
L-asparaginase
D-aspartic acid
morphine
PLG
Ventral tegmental area, 925
locomotor activity
morphine
sensitization
Viminol R_2 isomer, 59
drug discrimination
operant behavior

Water deprivation, 1
drinking
locomotor activity
β-phenylethylamine
White-footed mice, 35
eating
hoarding
naltrexone
Withdrawal, 175
aversion
classical conditioning
Working memory, 659
cholinergic neurons
radial maze
reference memory
scopolamine

Yohimbine, 591
anorexia
eating
obesity
rauwolscine

VOLUME 20 1984

AUTHOR INDEX

Abbott, M. E., 91
Aceto, M. D., 635
Amir, S., 483
Ananda, S., 55
Anton, R. F., 883
Antunes-Rodrigues, J., 301
Apfelbaum, M., 675
Aprison, M. H., 425
Arito, H., 757
Artman, L. D., 771
Asin, K. E., 323

Baigts, F., 675
Baker, G. B., 215
Balmagiva, T., 911
Balster, R. L., 373
Barraco, D. A., 479
Barrett, J. E., 763
Barry, H., III, 669
Bartke, A., 107, 115
Bassett, J. R., 221
Basura, M., 707
Bättig, K., 583
Beales, M., 591
Beatty, W. W., 747
Beck, C. H. M., 215
Bedford, J. A., 317, 819
Beninger, R. J., 659, 701
Bennett, E. L., 405
Berchou, R., 233
Berge, O.-G., 289
Berkman, K., 29, 519
Berman, R. F., 261
Berry, S. L., 747
Bertiere, M. C., 675
Block, R. I., 233
Bloom, A. S., 547
Bluth, R., 169
Bodnarenko, S. R., 251
Boegman, R. J., 659
Borsini, F., 489
Bracs, P. U., 49
Bree, M. P., 293
Brightwell, W. S., 269
Broadhurst, P. L., 845
Brocco, M., 543
Brown, M. M., 629
Burch, J. B., 771
Burg, J. R., 269
Burton, M. J., 835
Buzzi, R., 583
Byrd, L. D., 255

Calderon, L. de C., 683
Callahan, M. F., 591
Cam, G. R., 221
Camargo, L. A. A., 301
Campbell, A., 875
Cangelosi, A. A., 209
Cannon-Spoor, H. E., 189
Carlton, J., 739
Carney, J. M., 567
Carroll, M. E., 137, 145, 779
Carter, R. B., 391, 799
Cassella, J. V., 935
Castaldi, W. R., 731
Castellano, C., 767
Chaturvedi, A. K., 559
Cherkin, A., 161
Chow, H. L., 215
Cho-Young, J., 639
Co, C., 429, 443
Code, R. A., 209
Collins, A. C., 125, 281, 771
Collins, M. A., 355
Continella, G., 689
Cooper, B. R., 799
Cooper, R. L., 527
Cooper, S. J., 1, 869
Costello, K. B., 747
Coutts, R. T., 215
Covian, M. R., 301
Crawley, J. N., 23
Crumbie, P. M., 387
Csányi, V., 767
Czech, D. A., 811

Dacanay, R. J., 175
Dalterio, S., 107, 115
Dantzer, R., 331
Dark, K. A., 327
Davis, H. P., 405
Deakin, J. F. W., 845
DeBold, J. F., 349
Delatte, S. W., 629
Delini-Stula, A., 613
Deutsch, R., 495
Dewey, W. L., 59
Diaz-DeLeon, R., 251
Dib, B., 45
Doka, A., 767
Donzanti, B. A., 243
Dooley, D. J., 613
Dourish, C. T., 1
Drago, F., 689
Duda, N. J., 227
Dudek, B. C., 91
Dunwiddie, T. V., 153

Eisenstein, E. M., 479
El-Defrawy, S. R., 659
Ellingboe, J., 103, 293
Ellinwood, E. H., Jr., 397
Ellman, G., 327
Elsohly, H. N., 819
Emery, D. E., 337
Erinoff, L., 707
Ervin, G. N., 799

Farber N. E., 547
Farrar, R. P., 863
Fasmer, O. B., 289
Fazio, J. K., 731
Fekete, M. I. K., 879
Fernando, J. C. R., 951
Fibiger H. C., 323
Fink, H., 513
Fischer, J. E., 875
Fletcher, P. J., 835
Flood, J. F., 161
Ford, K. A., 643
Fossom, L. H., 415
Franklin, S. R., 209
Franko, C. M., 379
Fratta, W., 69
Freed, W. J., 189
Freedman, N. L., 361
Freeman, A. S., 373
Fujiwara, M., 457
Fukuda, T., 803
Furukawa, T., 943

Galin, D., 327
Gallistel, C. R., 73
Garg, A., 91
Gessa, G. L., 69
Gilliam, P. E., 863
Girardot, M.-N., 631
Glennon, R. A., 181, 506, 635
Glusman, M., 829
Goeders, N. E., 451
Gomez-Ramos, P., 79
Gonzalez, E. R., 85
Gonzalez, L. P., 397
Gregory, P., 49
Griffiths, R. R., 965
Gross, E., 911
Grossett, D., 697
Grove, E. A., 405
Guilloneau, D., 331

Hagen, T. C., 547
Hamby, L. S., 609
Hancock, R., 959
Harkins, D., Jr., 387
Harvey, K. L., 293
Haswell, K. L., 387
Hatipoğlu, I., 519
Heffner, T. G., 947
Heinsbroek, R. P. W., 663
Henderson, J. K., 463
Hendrie, H. C., 425
Hennig, C. W., 731
Herman, J. P., 331
Hillard, C. J., 547
Hingtgen, J. N., 425
Hiraga, Y., 205
Ho, I. K., 951
Hoffer, B. J., 153
Hole, K., 289, 789
Holloway, F. A., 631
Hori, Y., 457
Hoskins, B., 951
Howerton, T. C., 125
Huang, D., 721
Hughes, C. A., 731
Huhtala, A., 841
Hunn, C., 613
Hutchings, D. E., 251
Hynes, M. D., 463

Iizuka, H., 531
Iwamoto, E. T., 959
Iwasaki, T., 205
Izumi, K., 803

Jackson, D. M., 49
Jackson, H. F., 845
Jacobowitz, D. M., 133
Jaffe, K., 683
Jalfre, M., 979
James, J. H., 875
Jarrard, L. E., 793
Jarvik, M. E., 55
Jeppsson, B., 875
Jhamandas, K., 659
Johansson, G., 841
Johnson, P., 567
Jørgensen, H. A., 289, 789
Joyce, J. N., 551, 575
Justice, J. B., Jr., 609

Kaegi, H., 343
Kaempf, G. L., 195
Kallman, M. J., 59, 195
Kameyama, T., 815
Kant, G. J., 793
Kanyicska, B., 879
Karmanova, I. G., 653
Karras, D., 73
Kassab, C. D., 387
Kataoka, Y., 457
Katsuragi, T., 943
Keller, G., III, 383
Kelly, P. H., 707
Kishita, C., 803
Kitsikis, A., 9
Kliner, D. J., 145
Koja, T., 803
Kokkinidis, L., 367
Koyuncuoğlu, H., 29, 519
Krieger, A. J., 85
Krimmer, E. C., 669
Kuribara, H., 247

Laakso, M.-L., 841
Lamon, S., 311
Lane, J. D., 429, 443, 451
Langnickel, R., 169
Larsson, K., 185
Lawson, J., 343
Leaf, R. C., 311
Leander, J. D., 391
Leaton, R. N., 935
Lee, J. A., 261
Le Moal, M., 331
Liddell, B. J., 307
Lindberg, K., 973
Linnoila, M., 527
Lobacheva, I. I., 653
Loew, G., 343
Lynch, M. R., 467

McGuire, M. S., 669
McIntire, K. D., 307
McMillan, D. E., 63, 543

Mackenzie, L., 537
Maldonado, H., 683
Mandenoff, A., 675
Mann, R. E., 639
Mansbach, R. S., 763
Marks, M. J., 771
Marks-Kaufman, R., 911
Marquis, D. K. L., 317
Martin, B. R., 373
Martin, G. E., 893
Martin, T. P., 863

Martin, W. R., 899
Massari, V. J., 269
Masur, J., 649
Mataga, N., 757
Mayfield, D., 107, 115
Meisch, R. A., 145
Meisenberg, G., 355
Mello, N. K., 103, 293
Menani, J. V., 301
Mendelson, J. H., 103, 293
Méthot, C., 495
Meyerhoff, J. L., 793
Miczek, K. A., 349
Millan, M. H., 473
Millan, M. J., 473
Minnema, D. J., 95
Miralto, A., 683
Mitsushio, H., 757
Moerschbaecher, J. M., 619
Mogilnicka, E., 613
Mokler, D. J., 227
Moore, K. E., 227
Moore, S. I., 799
Morali, G., 185
Morgenstern, R., 169, 513
Morin, L. P., 855
Mormède, P., 331
Moss, R. L., 337

Nakajima, S., 859
Napoli-Farris, L, 69
Neill, D. B., 609
Nelson, B. K., 269
Nemeth-Coslett, R., 965
Nielsen, D. W., 261
Nielsen, J. A., 227
Nieto, J., 39
Nil, R., 583
Nomoto, M., 803
Nuñez, J. A., 683

O'Connor, M. F., 771
Oelssner, W., 169, 513
Oliverio, A., 767
Olson, G. A., 629
Olson, L., 153
Olson, R. D., 629
Oltmans, G. A., 591

Palmer, M. R., 153
Pangborn, D., 361
Papp, N. L., 893
Peeke, H. V. S., 327
Peterson, M. E., 855
Phillips, T. J., 91
Picker, M., 697
Pivorun, E. B., 35
Poling, A., 697
Popova, N. K., 653
Porsolt, R. D., 979
Porter, J. H., 467
Posadas-Andrews, A., 39
Pratt, J. A., 507
Preston, K. L., 601
Puglisi-Allegra, S., 767
Punnen, S., 85

Randall, C. L., 883
Rastogi, S. K., 63
Rech, R. H., 489
Rennert, O. M., 567
Reus, V. I., 327
Riley, A. L., 175, 643
Roberge, A. G., 9
Roehrs, T., 849
Rose, J. E., 55
Rosecrans, J. A., 95, 185, 467, 635
Rosenzweig, M. R., 405
Roux, S., 979
Rowland, N., 739

Saad, William A., 301
Saad, Wilson A., 301
Sabuncu, H., 29, 519
Salamone, J. D., 609
Samanin, R., 489
Samson, H., 849, 973
Sapru, H. N., 85
Sardenga, P. B., 629
Scampoli, D. L., 681
Scapagnini, U., 689
Schechter, M. D., 181
Schuster, C. R., 601
Seale, T. W., 567
Segal, M., 133
Seiden, L. S., 601, 947
Seiger, Å., 153
Seppala, M., 527
Shannon, H. E., 715
Shephard, R. A., 845
Shilling, N. V., 653
Shimada, A., 531
Shimizu, T., 803
Singer, G., 807
Shohami, E., 133
Shook, J. E., 59
Sigügenza, J. A., 79
Simmons, W. H., 355
Singer, G., 537
Sloan, J. W., 899
Smith, E. O., 255
Smith, G. E., 161
Smith, J. E., 429, 443, 451
Smolen, T. N., 125, 281
Snodgrass, S. R., 707
Souza, M. L. O., 649
Sparber, S. B., 415
Spencer, B. D., 731
Spirduso, W. W., 863
Stacey, N., 887
Stanley, J. A., 763
Stark, E., 879
Steger, R., 107, 115
Stein, E. A., 811
Stewart, J., 917, 925
Stolerman, I. P., 507
Stotz, D. C., 145
Sy, T. M., 675
Szentendrei, T., 879

Tadokoro, S., 247
Takashima, M., 757
Tang, A. H., 209
Tang, C., 537
Tannenbaum, M. G., 35
Thompson, D. M., 619
Todd, G. D., 899
Toll, L., 343
Tomie, A., 379
Toru, M., 757
Turkish, S., 869
Turner, C. E., 819
Tveiten, L., 289

Ueki, S., 457
Ukai, M., 815
Uretsky, N. J., 243
Ushijima, I., 943
Uyeno, E., 343

Vachon, L., 9
van de Poll, N. E., 663
van Hartesveldt, C., 551, 575
van Oyen, H. G., 663
Vezina, P., 925
Vogel-Sprott, M., 639
Vosmer, G., 947

Wagner, G. C., 379, 601
Wallace, M., 537, 807
Wallace, S., 697
Wallis, C. J., 883
Walters, T. J., 863
Wash, C., 959
Webster, E. L., 799
White, B. C., 383, 387
Wilcox, R. E., 863
Williams, N. S., 681
Williamson, E. C., 959
Wilson, M. C., 317, 721
Winslow, J. T., 349
Winter, J. C., 201
Wirsching, B. A., 659
Wneck, D. J., 311

Yamada, S., 815
Yanagita, T., 531
Yang, O., 849
Yoburn, B. C., 829
Young, R., 501, 635

Zabala, N. A., 683
Zellner, D. A, 175
Ziparo, V., 875